

Appl. Serial No. 09/827,763
Docket No.: GUID.008US01
Amendment and Response

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IN THE CLAIMS

Please cancel claims 29-36 withdrawn by the Examiner.

Please amend the claims as indicated below:

- Sub
B1
A1
1. (Currently Amended) A body implantable system, comprising:
at least one lead comprising an atrial electrode for sensing and
pacing an atrium of a heart;
energy delivery circuitry coupled to the at least one lead;
a detector, coupled to the at least one lead, that detects high atrial
interval rates indicative of atrial arrhythmia;
memory configured to define an atrial window having a first length
and a first satisfaction criterion; and
a control circuit coupled to the energy delivery circuitry, detector
and memory, the control circuit inhibiting the energy delivery circuitry from
delivery of delivering pacing signals to the atrium in response to detecting the
high atrial interval rates and wherein the detector detects ~~detecting~~ atrial intervals
while ~~inhibiting~~ delivery of the pacing signals to the atrium is inhibited, the control
circuit classifying the atrial intervals in an the atrial window and declaring an atrial
episode in response to satisfying the atrial window by ~~comparing classified~~
evaluating the atrial intervals in the atrial window with respect to the first
satisfaction criterion.
2. (Original) The system of claim 1, wherein the control circuit inhibits
delivery of the pacing signals in response to detecting high atrial interval rates
indicative of atrial flutter.
3. (Original) The system of claim 1, wherein the control circuit inhibits
delivery of the pacing signals in response to detecting high atrial interval rates of
at least about 130 bpm.

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4. (Currently amended) The system of claim 1, wherein the control circuit inhibits delivery of the pacing signals during a duration of a detection window initiated by the control circuit in response to detecting high atrial interval rates indicative of atrial arrhythmia.

5. (Currently amended) The system of claim 1, wherein the control circuit initiates a post-ventricular atrial refractory period (PVARP) and the detector detects an atrial event occurring within the a post-ventricular atrial refractory period (PVARP), and the control circuit initiates a detection window in response to the sensed detected atrial event and inhibits delivery of an atrial pace signal during a duration of the detection window.

6. (Original) The system of claim 5, further wherein the detector detects a subsequent atrial event occurring before expiration of the detection window, the control circuit initiating a subsequent detection window in response to the sensed subsequent atrial event and inhibiting delivery of a subsequent atrial pace signal during a duration of the subsequent detection window.

7. (Original) The system of claim 1, wherein the control circuit inhibits delivery of the pacing signals to cause an increase in a rate of atrial window satisfaction.

8. (Original) The system of claim 1, wherein the control circuit enables delivery of the pacing signals to the atrium after ceasing of the high atrial interval rates indicative of atrial arrhythmia.

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9. (Currently amended) The system of claim 1, wherein the atrial window length is defined by a number of atrial interval samples ranging ranges between about 20 and 60 atrial interval samples.

10. (Currently amended) wherein the first satisfaction criterion represents a predetermined number, percentage or ratio of atrial intervals classified by the control circuit as fast atrial intervals relative to the atrial window length.

11. (Currently amended) The system of claim 1, wherein the first satisfaction criterion represents about 80 percent of atrial intervals classified by the control circuit as fast atrial intervals.

12. (Currently amended) The system of claim 1, wherein the atrial window has a second satisfaction criterion, and the controller further verifies that the declared atrial episode is a sustained atrial episode in response to the atrial window being satisfied by a the second satisfaction criterion for subsequent atrial intervals.

13. (Currently amended) The system of claim 12, wherein each of the first and second satisfaction criterion represents a predetermined number, percentage or ratio of atrial intervals classified by the control circuit as fast atrial intervals relative to the atrial window length, and the second satisfaction criterion is less than the first satisfaction criterion.

14. (Original) The system of claim 13, wherein the first satisfaction criterion represents about 80 percent of the atrial intervals classified as fast atrial intervals and the second satisfaction criterion represents about 60 percent of the subsequent atrial intervals classified as fast atrial intervals.

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15. (Currently amended) A method implemented with an implantable medical device capable of sensing and pacing at least an atrium of a heart, comprising:

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- detecting high atrial interval rates indicative of atrial arrhythmia;
- inhibiting delivery of pacing signals to the atrium in response to detecting the high atrial interval rates;
- detecting atrial intervals while inhibiting delivery of the pacing signals to the atrium;
- classifying the atrial intervals in an atrial window, the atrial window having a length and an associated first satisfaction criterion; and
- declaring an atrial episode in response to satisfying the atrial window by ~~comparing classified~~ evaluating the atrial intervals in the atrial window with respect to the first satisfaction criterion.

16. (Original) The method of claim 15, wherein inhibiting delivery of the pacing signals comprises inhibiting delivery of the pacing signals in response to detecting high atrial interval rates indicative of atrial flutter.

17. (Original) The method of claim 15, wherein inhibiting delivery of the pacing signals comprises inhibiting delivery of the pacing signals in response to detecting high atrial interval rates of at least about 130 bpm.

18. (Currently amended) The method of claim 15, wherein a detection window is initiated in response to detecting high atrial interval rates indicative of atrial arrhythmia, and inhibiting delivery of the pacing signals comprises inhibiting delivery of atrial paces during a duration of a the detection window initiated in response to detecting high atrial interval rates indicative of atrial arrhythmia.

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19. (Original) The method of claim 15, further comprising:
detecting an atrial event occurring within a post-ventricular atrial
refractory period (PVARP);

initiating a detection window in response to the detected atrial
event; and

inhibiting delivery of an atrial pace signal during a duration of the
detection window.

20. (Original) The method of claim 19, further comprising:
detecting a subsequent atrial event occurring before expiration of
the detection window;

initiating a subsequent detection window in response to the
detected subsequent atrial event; and

inhibiting delivery of a subsequent atrial pace signal during a
duration of the subsequent detection window.

21. (Original) The method of claim 15, wherein inhibiting delivery of the
pacing signals comprises inhibiting delivery of the pacing signals to cause an
increase in a rate of atrial window satisfaction.

22. (Original) The method of claim 15, further comprising enabling
delivery of the pacing signals to the atrium after ceasing of the high atrial interval
rates indicative of atrial arrhythmia.

23. (Currently amended) The method of claim 15, wherein the atrial
window length is defined by a number of atrial interval samples ranging ranges
between about between 20 and 60 atrial interval samples.

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24. (Original) The method of claim 15, wherein the first satisfaction criterion represents a predetermined number, percentage or ratio of the atrial intervals classified as fast atrial intervals relative to the atrial window length.

25. (Original) The method of claim 15, wherein the first satisfaction criterion represents about 80 percent of the atrial intervals classified as fast atrial intervals.

26. (Original) The method of claim 15, further comprising verifying that the declared atrial episode is a sustained atrial episode in response to the atrial window being satisfied by a second satisfaction criterion for subsequent atrial intervals.

27. (Original) The method of claim 26, wherein each of the first and second satisfaction criterion represents a predetermined number, percentage or ratio of the atrial intervals classified as fast atrial intervals relative to the atrial window length, and the second satisfaction criterion is less than the first satisfaction criterion.

28. (Original) The method of claim 27, wherein the first satisfaction criterion represents about 80 percent of the atrial intervals classified as fast atrial intervals and the second satisfaction criterion represents about 60 percent of the subsequent atrial intervals classified as fast atrial intervals.

Claims 29-36 (Cancelled).